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Social Presence Theory: Creating Engaging and Strong Online Learning Communities at the K-12 Level

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**Social Presence Theory: Creating Engaging and Strong Online Learning
Communities at the K-12 Level**

By

Abigail Amundson

A capstone submitted in partial fulfillment of the requirements for the degree of Master
of Arts in Teaching

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Committee:

Andreas Schramm, Faculty Advisor
Grant Felton, Content Reviewer
Mary Schuster, Peer Reviewer

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CHAPTER 1

Introduction

Overview of the Chapter

In chapter one, the context of the study will be explained as well as the order of events that led and inspired me to research the topic: social presence and online schools. Covid-19 caused school districts to create online schools for the 2020-2021 school year. The end of the 2020-2021 school year is approaching. Even as vaccines for covid-19 are coming out, and things are starting to open up, online public schools at the K-12 level are not disappearing. The Rand Corporation surveyed 375 school districts which included public and charter schools in the United States and found that 20% schools will have an online school option or are considering it for the 2021-2022 school year (Rand, 2020). Many of the teachers who taught virtually in the 2020-2021 school year had never taught virtually before and spent the year navigating best teacher practices for creating a strong, engaging online learning community with successful learning outcomes through trial and error. The purpose of the study to find out what teachers learned from teaching online this year which can apply to the following years. The study will examine the following questions:

How can K-12 teachers create a synchronous online environment where students have a social presence in the classroom?

Did social presence in an online learning environment result in higher academic achievement?

Chapter one will discuss my educational and professional journey to the research question of social presence theory in online learning environments. Overall, chapter one will discuss the context of how I developed interest to research social presence in online learning environments. The first section will discuss why I went back to school to be a teacher. The second section will discuss my equity journey at Hamline University and professionally through my subbing, as well as interest in collaborative learning environments. Lastly, I will discuss student teaching virtually through the covid-19 pandemic and my current position as a 2nd grade virtual teacher which led to my interest in creating strong communities with collaborative learning environments while teaching virtually.

Deciding to Become a Teacher

If someone told me I would become an elementary teacher one day, I would have never believed you. As a kid, I was very shy with a small group of friends. Speaking in front of groups of people I did not know frightened me. Growing up, I was the oldest cousin on both sides of my family and found that the oldest cousin's job is to entertain the kids. We differed so much in age and ranged from the youngest 5 years old to me the oldest 17. I ended up becoming the leader of the group and found ways we could all play together and have fun. We ended up creating music videos using an iPod. Everyone had a job in the video and everyone's interests and ideas were included. The end product was a lot of embarrassing videos, but reflecting back, I realized how much more fun we had including everyone, their interests, and being able to look back at the fun times we had. Working together and collaborating on a big project together that we were all passionate and excited about even though we were different ages with different interests is similar to

teaching. How can teachers create strong collaborative learning communities where all students feel welcome and interests included?

When I turned 18, I ended up majoring in business. During my undergrad, I would always gravitate towards summer jobs or internships working with kids. At my church, I worked as a summer stretch teacher working with middle school kids where we volunteered at a variety of places in the community. I also did an internship with boys and girls club where I was a management intern. The most influential job that made me realize I wanted to be a teacher was a summer daycare job where I was a classroom instructor. My job was to lead the class through activities I created for students to do throughout the day. I realized through this job the importance of creating strong learning communities and the importance of play, friendships, and projects that students wanted to do that piqued their interest. After I finished college, I did a couple of sales jobs. I kept thinking about how fulfilling and amazing all of my experiences were working with kids. I decided I needed to go back to school to become a teacher.

My Equity Journey and Interests in Digital Student-Centered Environments

While taking classes at Hamline University, I realized teaching was so much more than I thought. Every class at Hamline was centered around equity. The class: cultural diversity changed the way I see the world, and I learned a about myself and the importance of taking action. It changed how I viewed education and saw the work towards all students having a sense of belonging with representation where they see themselves in school. I learned that the teacher holds all the power in engaging the students and facilitating an environment where students' cultures and interests are a part of school. Students learn better in a student-centered classroom. The overall goal of a

student-centered classroom is for students to have the self-confidence to achieve their dreams, be self-advocators for themselves, self-motivators, and self-managers of their behavior. Students need to feel trust and community in my classroom. The teacher needs give students choices in how they respond to curriculum. Using digital platforms open many different opportunities for students to respond to the curriculum in a way they choose. Teaching in person or online: building community, involving students' cultural backgrounds and interests as a part of their educational experience is vital for schools to be successful. That is when I became highly interested in using technology to create student-centered environments.

When studying ways teachers create student centered classrooms using technology, I became interested in flipped classrooms: using technology to create short videos for the students to watch on their own, which would allow more time to facilitate student centered activities where students collaborate together in the classroom. There have not been a lot of studies at the elementary level and few at the high school level. Later on, I became highly interested in utilizing technology in order to differentiate and create choice in how students respond to the lesson. I was interested in researching tools and research management systems that teachers could use in the classroom. My plan was originally to explore different ways students could respond to activities in an in person setting during my student teaching experience. 2 weeks before my in-person student teaching experience started, I found out I would be teaching 100% virtually due to the covid-19 pandemic.

Teaching Virtually Amid the Covid-19 Pandemic

In August, I found out that I would be doing my student teaching virtually at an online public school created in response to the covid-19 pandemic and I was initially bummed. I was highly stressed in what that would look like and how I would teach and engage students virtually using a student-centered approach. I was luckily paired with a strong mentor who believed in building strong learning communities where student interests were valued. Planning the first week was the hardest. Figuring out the schedule and deciding how long the students could last in a google meet and deciding which activities should be synchronous or asynchronous. We spent hours planning the first 2 days to see how it went, and then adjusted and planned the last three days. Getting used to technology was a struggle at first. Trying to figure out which digital tools to present your material depending on what you are doing while navigating multiple screens through the many tabs on your computer took lots of practice. The most difficult part was changing the in-person lessons to virtual ones. It took a lot of creativity and time to transform an in-person lesson to a virtual one while still keeping it engaging and hands on.

Creating strong communities and engaging student-centered collaborative learning environments in online settings is not necessarily harder, many of us just hadn't done it before. None of the students had learned online before either. With lots of trial and error and rocky roads, the school year has ended with more information in how create strong learning communities. After student teaching, I started researching how to create community in online learning environments. I came across a research study: Social Presence in the Web-Based Classroom: Implications for Intercultural Communication written by (Yidlez, 2009). The words social presence stuck out to me the most. I found

out that “social presence is the degree to which someone is perceived as a real person in online communication and plays an important role in online education” (Gunawardena, 1995). I continued to look for researchers who studied social presence theory and found many studies measuring social presence in online learning environments and how it contributes to higher student satisfaction and higher perceived learning.

Niche

Online schools will still be open in many districts the following school year. Fortunately, teachers will be able to take what they learned this past school year and apply what worked and didn't for next year. Social presence theory has been studied by many researchers. Gunawardena in 1997 studied students perceived social presence and satisfaction at the college level. Richardson in 2003 studied students perceived social presence and perceived learning at the college level. Many of the researchers studied social presence at the student point of view. Social presence has rarely been studied at the K-12 level if not at all at the K-5 level. Many past studies have mentioned that learner centered or collaborative learning environments help create social presence in online classrooms, but did not go into detail in how teachers did so in the classroom. I'm studying online synchronous learning environments where students have a social presence in the classroom because I want to find out how social presence in an online classroom correlates with academic achievement in order to help readers understand how teachers create a social presence environment at the K-12 level. It led to my questions: how can K-12 teachers create a synchronous online environment where students have a social presence in the classroom? Did social presence in an online learning environment result in higher academic achievement?

Conclusion

In Chapter One, I examined my journey and the steps to discovering my topic: social presence theory in online K-12 classrooms. K-12 online learning is not new, but has become more popular since the covid-19 pandemic. Technology offers many endless opportunities in order to create environments where students have opportunities to respond to the curriculum in the way they choose, create strong communities, and work together with their other peers just like they would in an in-person classroom. Many of my coworkers who have taught 100% virtual this entire year through trial and error have found what works and what doesn't in order to create this type of environment. This study will discover best practices in order to create an online learning environment with perceived social presence.

In Chapter Two, literature on social presence theory will be analyzed. Social presence theory will be defined and examined in the first section. Section two will compare different ways social presence theory has been measured in online classrooms. Section 3 will discuss culturally responsive and sustaining pedagogy as well as specific tools to create a culturally responsive classroom in an online environment. Chapter Three will provide the methods for the study: the research paradigm, the participants, setting, the questionnaire and the interview questions will be discussed. In Chapter Four, qualitative and quantitative data taken from the questionnaire and interview will be analyzed. In Chapter Five, I will reflect and analyze the findings of the study in order to find strategies and tools for teachers to use to create a social presence environment in online teaching environments.

CHAPTER TWO

Literature Review

Social Presence Theory Defined

“Social presence theory is the degree to which someone is perceived as a real person in online communication and plays an important role in online education” (Gunawardena, 1995). Enhancing student’s perception of social presence increases instructional effectiveness and learning in an online learning environment. To increase perceived social presence, teachers must use techniques and interaction skills to build an online classroom community. The research questions being investigated are: How can K-12 teachers create a synchronous online environment where students have a social presence in the classroom? Did social presence in an online learning environment result in higher academic achievement? This section will define what social presence theory is and the original creator. Immediacy and intimacy concepts will also be defined as well as its connection to the theory. Digital learning has changed over time as well as the theory. The second part of the section will mention other researchers and their emerging definitions. The third section will discuss the benefits of social presence theory in creating a strong community in online learning environments.

Beginnings of Social Presence Theory

Social presence theory has been around long before the popularity of online courses and widespread of computers. Social presence theory was originated by Short, Williams, and Christie in (1976) where they studied face to face, audio, and closed-circuit television encounters. It was not originally for learning digitally. Short, Williams, and

Christie define social presence theory as: “the degree of salience of the other person and the interaction and consequent salience of the interpersonal relationships” and “the ability communication media have to transmit social cues” (Short, 1976). The social presence factor was defined by hot-cold, humanizing, and dehumanizing and sensitive-insensitive factors. Social presence is the relationship between interactive use and personal identity. The study found that participants who used bulletin board had a stronger social presence than participants who were inactive. Short, Williams, and Christie created social presence theory on two concepts by other researchers.

Intimacy- “A sense of belonging and closeness- “physical distance, eye contact, smiling, body language, and how we interpret non-verbal cues” (Argyle & Dean 1965).

Immediacy- urgency to connect shows importance and closeness to the relationship (Wiener & Mehrabian, 1968)

Evolved Definitions

Social presence theory has evolved over time as technology has changed and there has been an increase of teaching through the web. Gunawardena defines social presence as “the degree to which a person is perceived as a real person in mediated communication” (Gunawardena, 1995). Although many researchers have defined social presence differently, they have common themes and usually include the intimacy and immediacy concepts. A more recent researcher Lowenthal (2010) noticed that researchers’ definitions of social presence theory go back and forth between different focuses of social presence theory. Some researchers define it as the emotional interpersonal connection communicating virtually while others focus on social presence theory being perceived that people are either being real or present in online

communication environments. Some researchers have included both (Lowenthal, 2010). Regardless of how researchers have defined social presence theory, they all have the common theme of building a strong online learning community.

Role of the Instructor

Researchers have discovered the role of the instructor why it is important to create an online learning environment where students have a perceived social presence in the classroom. When communicating online, if there is a lack of verbal cues, it can cause an impersonal feeling (Walther, 1996). Higher levels of frustration and low level of affective learning will be the outcome if there is a lack of social presence (Rifkind, 1992). This section will focus on the role of the instructor and the importance of creating a social presence environment in online classrooms.

It is important to understand that many students are new to learning in an online setting and have no idea on how to navigate and have meaningful interactions with their peers and learn effectively in an online setting. The teacher influences the students' perceptions in the environments that they create. Knowing this as the instructor, it is the teacher's role to create this type of environment by using techniques and skills to strengthen social presence in the online classroom (Tu, 2002). Student perceptions of their online learning environment and their peers and their human qualities depend on the environment that the teacher creates (Gunawardena, 1995). The degree in how the instructor projects themselves in an online communication environment and providing multiple avenues in order to build interaction among students and create a strong classroom community (Garrison, 1997). Instructional effectiveness is improved due to

social presence which makes it one of the most significant factors in distance education (Tu, 2002).

Measuring Social Presence

Because the definitions of social presence theory have changed over time, researchers have measured social presence theory differently as well. Many have measured using common themes of being on the spectrum of measuring the immediacy factor, intimacy factor, or both. This section will focus on researchers and how they measured the theory, the situation, who they were measuring, as well as the results of their research.

Impactful Studies on Social Presence Theory

Researchers have measured social presence in many different ways that are on the spectrum of either measuring the immediacy factor, the intimacy factor, or both. Short, Williams and Christy (1976) measured social presence by these factors: personal impersonal, sensitive-insensitive, warm-cold and sociable-unsociable, and applied a semantic differential technique. Immediate factors are measured by: interactive, personal, sensitive, social, and warm.

Gunawardena and Zittle (1997) created a Likert survey in order to measure social presence to predict satisfaction in a virtual teaching environment. They combined a 3 predictor model: Social presence, student perception of having equal opportunity to participate, and technical skills. Gunawardena and Zittle found that social presence can correlate with satisfaction in an online course. The study focused on the immediacy concept defined by Short, Williams, and Christie (1976). The study was on graduate students from multiple universities who were all taking an online research course and

participated in the GlobalEd computer conference. At the conference, they discussed their research and experiences in distance education. The class lasted a semester. What was missing in the study was if social presence could predict learning outcomes. Richardson take's Gunawardena and Zittle's study and questionnaire a step further.

Richardson and Swan's research was based on Empire state Colleges online learning courses and 97 students were surveyed at the end of the semester. Richardson's focus was measuring student's perceived social presence perceived satisfaction, and perceived learning.

Tu (2002) created the social presence and privacy questionnaire. It was based off of 2 other instruments: CMC attitude instrument (Steinfeld, 1986) and perceived privacy (Witmer 1997). Tu measured 8 objectives: social presence, privacy, utility, ease of use, interactivity (immediacy), language, CMC experience and competence, and demographics. TU found that social presence makes up 3 dimensions: social context, online communication, and interactivity. TU found that there was a significant correlation between perceived social presence and privacy. Tu did another study in 2008, revised his survey, and shared the instrument. TU surveyed 210 students who participated in graduate education programs. He measured 4 different aspects of social presence: social context, privacy, interactivity, and online communication and had different questions specific to each category that make up social presence. The survey instrument will be listed in the next section as well as the results.

Lin was inspired by Tu's questionnaire from 2001 as well as Picciano's in 2002. Lin sent a questionnaire to 15 graduate students who were taking an online course in order to measure social presence in online learning settings. The last 10 questions are

newer which focused on social navigation and awareness of others and understanding that others are aware of your actions (Lin, 2004).

Survey Instruments from Impactful Studies

This section will focus on the survey instruments that researchers used to measure social presence theory in online classrooms. Surveys were chosen that made the most impact in studying the theory. The surveys mentioned below are Gunawardena and Zittle's research study, Richardson and Swans study, Tu's Study, and Lin's study.

A questionnaire was developed and measured: social presence, active participation in the conference, attitude toward digital learning, issues such as technical issues, confidence, perception of having an equal opportunity to participate, training in using the site, and overall satisfaction (Gunawardena and Zittle, 1997). Here are the questions that specifically measured social presence:

1. Messages on GlobalEd were impersonal**
2. CMC is an excellent medium for social interaction.
3. I felt comfortable conversing through this text based medium.
4. I felt comfortable introducing myself on Global Ed
5. The introductions enabled me to form a sense of online community.
6. I felt comfortable participating in Global Ed discussions
7. The moderators created a feeling of online community.
8. The moderators facilitated discussions in the GlobalEd conference.
9. Discussions using the medium of CMC tend to be more impersonal than face to face discussions

10. CMC discussions are more impersonal than audio teleconference
discussions**

11. CMC discussions are more impersonal than video teleconference
discussions**

12. I felt comfortable interacting with other participants in the conference

13. I felt that my point of view was acknowledged by other participants in
GlobalEd.

14. I was able to form distinct individual impressions of some Global Ed
Participants even though we communicated only via a text based medium

Likert Scale 1= Strongly agree, 2 = disagree, 3 = Uncertain, 4 = Agree 5 =
Strongly Agree ** = Reverse coded for analysis

(Gunawardena & Zittle, 1997)

Students also filled out questions regarding their satisfaction of the course.

Gunawardena and Zittle found that a student's perceived social presence in the course
correlated with student satisfaction of the course (1997).

Richardson and Swan used Gunawardena's survey while also asking additional
questions to measure student's perceived learning. Here are additional, noteworthy
questions that Richardson and Swan asked on her survey and used a 6 point Likert scale.

1. My level of learning that took place in this course was of the highest quality
2. Overall, the course met my learning expectations
3. Overall, the instructor for this course met my expectations.

(Richardson & Swan, 2003)

Richardson also used Gunawardena's questions/ indicators and measured social presence on each specific activity: meet your classmates/ bulletin board, class discussions. Question areas, lectures, notes, reading assignments, written assignments, individual projects, group projects, self-tests, module tests, and final exam. The activities' social presence rating differed. Open ended questions that Richardson and Swan asked was:

1. The quality of learning for this activity was excellent
2. How satisfied were you with this course? For example, were your goals and/or expectations met? Please explain (e.g., were the course activities and assignments appropriate, was content well-organized, etc.).
3. What was your reason for taking the course in the online delivery format (e.g., like to interact with fellow students online, only offered online, etc.)? 3.
4. Which aspect of this course was most beneficial to you and why? (This can include different types of course activities, types of interactions, etc.) 4.
5. How much interaction have you had with your instructor (e.g., moderate, sufficient, lacking)? Please describe.
6. In relation to student-to-student interaction, would you say the type and amount of student participation was adequate for this course? Based on these observations, are there any recommendations you would make to the SUNY Learning Network?

(Richardson & Swan, 2003)

Richardson and Swan found that students who scored high on perceived social presence, scored high on perceived learning. Perceived social presence students who

were satisfied with their professor also had high social presence scores. Course activities that students stated were beneficial because it included the presence of peers, and or the instructor (Richardson & Swan, 2003). The research on traditional, face-to-face teaching and learning has shown that teacher immediacy behaviors and students' resulting perceptions of social presence are essential to learning in terms of affective, cognitive, and student attitudinal effects (Richardson & Swan, 2003). Each of the six individual activities for which students were asked to provide social presence and perceived learning scores demonstrated significant correlations (Richardson & Swan, 2003). This indicates that social presence of the teacher and/or other students was perceived by students is an important part of the educational experience. Activities that had the highest correlations with students' perception of social presence were class discussion and group projects. Activities that had the lowest, yet still significant, correlations were lectures, notes, and/or reading assignments.

Below is Tu's revised questionnaire in 2008 and the results from the study.

Social context

- CMC messages are social forms of communication.
- CMC messages convey feeling and emotion.
- CMC allows me to build more caring social relationships with others.
- CMC permits the building of trust relationships.

Privacy

- CMC is private/confidential.
- It is unlikely that someone might obtain personal information about you from the CMC messages.

- It is unlikely that someone else might redirect your messages.

Interactivity

- Users of CMC normally respond to messages immediately.
- I am comfortable participating, even if I am not familiar with the topics.
- I am comfortable with the communication styles employed by CMC users.

Online Communication

- It is easy to express what I want to communicate through CMC.
- My computer Keyboard skills allow me to be comfortable while participating in CMC.

(Tu, 2008)

Tu in 2008 found that Social context interactivity, and online communication were strong predictors of social presence. The study questioned whether privacy was an impactful factor of online social presence (Tu, 2008).

Here is Lin's questionnaire from 2004. Factor 2: Social comfort of expressing and sensing affect and factor 3: social navigation were added additionally to test for internal consistency of past social presence questions

Lin

Factor 1 Perception of assistance of group activity to learning

- I felt like I was a member of a group during this past week's activities
- I felt comfortable participating in this past week online group activities
- I felt I came to know the other students in this past week online group activities
- This past week, online group activities helped me accomplish the assignment with higher quality than if I were working alone

- This past week online group activities helped me learn more efficiently than if I were working alone

Factor 2

- Social comfort of expressing and sensing affect
- I felt comfortable of expressing and sensing affect
- I felt comfortable expressing my humor
- I was able to appreciate the humor of members of the group
- I was able to form distinct individual impressions of some group members during the online group activities

Factor 3

- Social navigation
- Actions by other members of my group usually influenced me to do further work
- Knowing that other members of my group were aware of my work influenced the frequency and quality of my work
- Knowing what other members of the group did helped me know what to do.

(Lin, 2004)

Lin found that the scales reliability score met acceptable standards and was internally consistent of measuring social presence theory. Lin reflected and mentioned that the sample size was small and future studies would be planned with larger sample sizes. Lin's questionnaire helped lead to further questions which can be used in online collaborative learning (Lin, 2004).

Online Learning Strategies

There have not been very many studies of social presence theory successes and strategies in online K-12 settings. This section will focus on ways of creating a learner centered community. The first part of this section will discuss culturally sustaining pedagogy and how it relates to social presence theory and building a strong classroom community where all students feel valued and welcome. The second section will discuss collaborative learning theories and its relation to social presence theory. Building online relationships is an important aspect of social presence theory. The third part of this section will discuss social presence strategies in creating strong online relationships.

Culturally Sustaining/Responsive Pedagogy

Culturally sustaining pedagogy is a practice that many schools have used in the in-person classroom to help build community and to fight systemic racism. Culturally sustaining pedagogy utilizes students' native languages and cultures to impact learner achievement in a positive way and deeply connect students to their cultural communities. In the end, it empowers students to use their backgrounds skills and strengths as an asset, not a deficit. Students learn from each other's cultures and backgrounds, and feel like they belong in schools. What does this have to do with social presence in an online setting? In order to build a classroom environment where students have a perceived social presence and feel like they belong in the classroom, culturally sustaining pedagogy must be included when teaching in an online setting.

Culturally sustaining pedagogy was built of culturally relevant and responsive pedagogy (Ladson-Billings 1995). Culturally relevant pedagogy transformed into culturally responsive teaching by (Gay, 2000) and the pedagogy is commonly used in schools today. Culturally responsive teaching affirms, respects, and celebrates cultures of

the students. In (2017), Paris and Alim developed culturally sustaining pedagogy that takes culturally responsive teaching to the next level. Culturally sustaining pedagogy sustains communities of color and cultures in schools as well as supporting students to question dominant structures in our world. Culturally sustaining pedagogy is essential to building strong learning communities where students feel welcome and thrive.

“The goal of teaching was to honor, explore, or extend, and problematize their cultural practices and investments” (Paris and Alim, 2017). White gaze is getting students of color to speak, write, and be more like white kids which is ultimately dehumanizing. Schools and teachers need to always be reflecting and adjusting to fit a world that changes constantly. Culturally sustaining pedagogy is important because students need to see them as whole, not broken, and be proud of who they are while also providing the support and opportunities to survive in a white dominant world.

In schools, it may be seen that some students refuse to learn or to not call themselves as writers. Diving deeper into why, it is because they were trying to protect themselves from the white gaze, and also because that is how society has labeled them. “Minority resistances are directly connected to constraints imposed upon them a monocultural and monolingual society based on white, middle-class norms of language and cultural being” (Paris and Alim, 2017). It is important to dig deeper and recognize the causes of social inequities and what to do about them.

It is important to give children a space to continue their development as critical members of society. It gives them a safe space to reflect, be vocal about inequities instead of accepting the current circumstances. Paris and Alim mention: “research on ethnic courses have shown that when curriculum affirms the identities of students through

development of critical intellectualism, students increase their engagement and motivation in schooling contexts and positive impacts students' academic success" (Paris & Alim, 2017). A space like this also helps students by giving them the tools to deal with other schooling spaces that invalidate their cultures. Having a space like this can also help "question and problematize and sometimes change the way we live our cultures and languages" (Paris & Alim, 2017).

The teacher should use their students' abilities and experiences and centralize their curriculum and use them for sources of knowledge and learning. Teachers need to know that the "goal of teaching is not to see how closely youth of color can perform to white middle class norms and that everyone is a valuable source that should be cultivated, sustained and revitalized" (Paris & Alim, 2017). To do this, teachers need to get to know their students especially at the beginning so that they can relate their curriculum back to the student and offer many choices in assignments.

What does this have to do with social presence theory and learning online? Social presence theory is founded on creating strong relationships and this cannot happen without students feeling like they belong in school. Culturally sustaining pedagogy needs to continue in online settings. Culturally sustaining pedagogy was proposed in 2017 and the majority of schools continue to follow culturally responsive teaching. There is a lack of studies of culturally sustaining pedagogy in online settings. Culturally sustaining and responsive pedagogy are quite similar and there have been a couple of studies on culturally responsive pedagogy.

Lawrance in 2020 did a study called: Teaching as Dialogue: An Emerging Model of Culturally Responsive Online Pedagogy. She investigated 4 high school teachers who

teach in an online setting in order to discover how to teach online while including culturally responsive teaching practices. Lawerance interviewed teachers as well as written responses to questions. Here two questions Lawerance asked:

- To what degree is creating a culturally responsive class environment important to you, and why? How do you facilitate cultural responsiveness online?

(Lawerance, 2020)

Lawerance found that a large theme in the answers of teachers was the importance of communication. Lawerance described online communication happening in 4 modes: personal, communal, instructive, and authentic.

Everyone comes to school with their own personal identity with family differences and values. Participation in schools can be affected based on communication. It is important for teachers to communicate clearly, so students and teachers are on the same page. Lack of communication can lead to lack of understanding, assumptions, and pointless punishment (Lawerance, 2020). Students may have different value systems, different ways in how they communicate, and it is important for teachers to dig a little deeper and to accommodate, communicate, so all students have the tools to succeed in school (Lawerance, 2020). Below are the 4 modes and Lawerance's findings:

Communication is personal

These are ways that culturally responsive teachers' strong relationships in online settings. Teachers frequently communicated through email, instant messages, phone conversations, and through individualized feedback on student assignments.

Individualized/ Personalized communication can be a benefit of online learning. It was stated that it was up to the teacher to initiate the conversation. The teachers used student

surveys at the beginning of the course to get to know their students and contacted the parents through phone and the students. Teachers monitored and checked in with students individually.

Communication is communal

The teacher needs to intentionally facilitate create community through individual. Group, and whole class feedback on assignments. Students were working together as a class toward common learning goals. They helped students with similar interests make connections with each other. Teachers must be deliberate in the ways they communicate to the whole class

Communication is instructive.

Teachers created a variety of learning activities to help learner needs and preferences. Teachers customized remediation and extension assignments to meet the needs of specific students. Teachers operated in the instructive domain as flexible in order to meet the needs of students

Communication is authentic

Students were engaged in active learning and authentic learning experiences. Teachers provided relevant examples as well as opportunities for choice. Activities and instruction are relevant to student's culture.

(Lawerance, 2020)

Delacruz in 2019 studied Virtual field trips and how they help students experience other cultures and connect with countries across the globe. The researcher identified the

steps to create a virtual field trip. Delacruz collected qualitative results across multiple virtual field trips developed across many elementary grade levels. The study found that the benefits of cross-cultural virtual fieldtrips included improved language skills, greater classroom engagement, deeper understanding of issues and perspectives, and increased sensitivity to other differences in cultures (Delacruz, 2019). The study discussed more than just visiting another country virtually, but also connecting with other classrooms across the globe. Data was collected over a 5-month period from multiple classrooms who were going on virtual fieldtrips. Overall, virtual fieldtrips helped students learn many aspects about the world and made connections without even leaving the classroom.

Online Relationship Strategies

Building relationships is crucial in online settings for students to succeed and feel a sense of belonging in the classroom. Research studies based on building relationships in online learning settings will be discussed.

In 2001, Mello overlooked multiple studies and found that storytelling has a major positive effect on the classroom because it helps students engage in imagination, cause sympathetic responses, participate more, and think deeper about the world that surrounds them (Mello 2001). It creates more empathy and connectedness in the classroom. When Robin Mello talks about storytelling, he means story telling without the aid of books, multimedia presentations, or other devices. Story telling can be used to teach content. It helps children in theory building and language fluency, it can enhance writing ability, and the students that are listening to their peer's story develops active

listening, and helps students visualize (Mello, 2001). Overall, students get an active voice in the classroom, and students develop other perspectives from each other.

In 2016, Berry discussed many ways of how community is developed in online classrooms and conducted interviews of professors and strategies they used to create community in an online setting. The strategies were: reaching out early and often, using class time to share personal things, using multiple technology platforms to connect and reach out- teacher to teacher or peer to peer (Berry, 2016). Creating discussion times in the classroom is highly important. Creating discussions student to student instead of teacher to student helped create community in the classroom. Teachers need to help students be authentic in virtual environments to develop a social presence, as well as promoting peer interaction (Berry, 2016).

Lowenthal in 2014 did a qualitative study and overall found many relationship strategies in order to strengthen social presence in the online classroom. Many activities and strategies were implemented in the classroom, and students were interviewed at the end to rank the activities that had the lowest and highest social presence. Lowenthal found that the highest scoring activities was providing personal, and individualized feedback, activities for students to collaborate, build relationships, and share, as well as the teacher to be accessible. The next paragraph will mention the specifically activities Lowenthal tried in the online classroom that scored high in social presence specifically to building relationships.

Lowenthal asked students questions where students could respond using pictures and videos in order to get to know each other more and build relationships. Here are some of the questions that Lowenthal asked:

1. What would you do if you had one extra hour in the day?
2. What are your superhero powers and how would they help you in life?
3. Pick 5 items to represent who you are.

(Lowenthal, 2014)

Overall, these questions-built community where students were creating digital bios of each other. Students could respond through any medium that made them feel comfortable and students could look at their peers' bios and how they responded.

While students were building relationships with each other, Students scored high on social presence of the teacher giving individualized and personal feedback. The teacher gave video feedback instead of just feedback alone which made it more personalized. The study mentioned how the teacher had time during the day where the teacher and student could talk 1:1, and the teacher would send personal emails to the student.

Izmirli (2019) studied techniques and strategies in a blended online course and discovered new possible strategies to establish social presence in online settings specifically to building relationships. Having live individual check ins with students help build relationships. Izmirli discovered that rewarding students to improve social presence and motivates students to attend more lessons, ask questions, and interact more in class (Izmirli, 2019). Using 3d virtual environments can increase social presence. Using avatars of the students, teacher, desks, and whiteboard makes it feel like a real classroom environment.

Collaborative Learning Strategies

Lev Vygotsky (1978) emphasizes the importance of cultural and social interactions in learning and that learning occurs in social and collaborative ways through lived experiences (Vygotsky, 1978). MacGregor in 1990 mentioned that knowledge is constructed through social interactions where student collaborate and negotiate meaning (MacGregor, 1990). Environments need to be student centered where the teacher becomes the facilitator. Building strong, collaborative learning environments where students have strong relationships with each other is essential for student success in online learning. Learners need to be engaged in themselves and their own learning as well as engaged in interactive of their groups learning. Online classes need to specifically designed in a way where students view each other as real, build trust, share experiences, and beliefs (Yildez, 2009).

A study by Ke focused on student centered learning and student satisfaction of an online class. The study was conducted with a diverse online student body. They investigated learner relevance, active learning, authentic learning, learning autonomy, and computer technology competence (Ke, 2013). The study found that there was higher learner satisfaction when the class was constructed of those 5 things that contribute to a student-centered collaborative learning environment. The research study found that there were lower dropout rates and that students were more likely to persist when the online class was student centered. The study also found that when the learning was authentic, the learners perceived what they were learning as more useful and were more engaged (Ke, 2013). The study also found that when students were more comfortable with the technology by taking the time at the beginning to teach the tools, they were more confident about learning online.

Chuang researched pre service teachers. The learning effects of creating web-based projects as well as using informal ways to learn such as social media in creating a learning community in online group collaborative learning was studied. The study involved 31 pre-educators. The study concluded that the pre-educators in the course felt a higher sense of belonging, when the learning was more informal as well as many opportunities to create projects user friendly digital with their peers (Chuang, 2016). Groups were created on Facebook, where they could reach out to each other and connect to their groups. Students realized they had many interests and it helped break the ice.

Lowenthal and Dunlap in 2014 studied best practices and activities to strengthen social presence environments by creating collaborative online environments through small groups. Student's peer reviewed each other's work in order to help each other make the best product (Dunlap and Lowenthal, 2014). Students provided improvement for each section that was constructive and professional. Lowenthal and Dunlap also used the "No Jeopardy" group work approach. This allows group members to turn in their product without missing points if another member does not do their part and not be penalized. Document co-creation was also used so students could contribute into one document in live time to each share their expertise. At the end students get to keep the document of all the valuable contributions and findings their group members made (Dunlap and Lowenthal, 2014). Social media such as Twitter was also used for students to connect to each other in informal ways.

Izmirlı (2019) studied techniques and strategies in a blended online course and discovered possible strategies to establish social presence in online settings specifically to create collaborative learning settings. Izmirlı found that students see their peers as real

and connected when students make presentations in synchronous live sessions in order to explain topics (Izmirli, 2019). Doing group work in a live synchronous section was also deemed valuable to the students. Dividing the class into groups where students get to discuss different topics, and when they come back, have a leader summarize what was discussed helped strengthen social presence.

The literature review discussed what social presence theory is, and how it has evolved over time and used in different settings. The importance of the instructor's role in and their intentional power of creating community was discussed. Researchers have measured social presence theory in multiple ways by creation of different questionnaire or interview tools. The questionnaire utilized in this study was inspired by the researchers in the literature review. Online learning strategies such as building relationships and collaborative learning strategies was discussed. The age groups K-12 are missing in the literature review. Almost all studies on social presence theory have been studied at the college level and were researched from the student's point of view. Because of the important role of the instructor and intentional strategies they need to implement in their classrooms, this study will focus on the teacher's point of view. The questions that are being investigated are: How can K-12 teachers create a synchronous online environment where students have a social presence in the classroom? Did social presence in an online learning environment result in higher academic achievement? Chapter Three will focus on the methods layout how the research study was conducted.

CHAPTER THREE

Methods

Introduction

The purpose of this study is to explore online teaching communities and how it relates to achieved learning in order to discover best teaching practices in creating strong relationship based online communities with student-student collaborative learning activities. The research questions being investigated is: *how can K-12 teachers create a synchronous online environment where students have a social presence in the classroom? Did social presence in an online environment result in higher academic achievement?* I am measuring social presence in online synchronous elementary classrooms because I want to find out the effect it has on engagement in the classroom and how teachers create a social presence environment. Students perceived social presence has shown higher engagement and academic achievement in online learning settings. Social presence theory in online learning environments has been studied by multiple researchers, but there are not many studies done at the K-12 level, especially at the elementary level. Many of the studies focused on perceived social presence from the student's perspective. It is up to the teacher to create environments with social presence. This study focuses on the teacher perspective of perceived social presence in their online learning environment and how it relates to academic achievement. Also, online K-12 schools will not be disappearing anytime soon. A mixed methods study will be conducted.

Teachers who taught 100% online this past school year filled out a questionnaire consisting of closed-form and open-ended questions. Chapter Three will go into detail of

the participants and setting. The methods of why and how the data was gathered will be discussed. This chapter will mention how the data will be analyzed and how the requirements of Hamline's Human Subject review will be met. Independent variables are sociability, comfort, and collaborative learning environments. The dependent variable is learning outcomes. The goal of this study is to measure social presence as well as explore further to find the best teaching practices in order to increase learning outcomes in online learning environments.

Research Paradigm

Convergent mixed methods design was used for this study, and the data was collected in one phase. The first section of the questionnaire was mostly quantitative data and a Likert 5 scale was used. Section 2 consisted of qualitative data: open ended questions. The quantitative and qualitative data will be combined and interpreted in a discussion section to decide whether the results have a convergence or divergence between the two sources. The Likert scale questions will be used to measure social presence and the effect of learning in online settings. The open-ended questions will be used to explore, explain, find insight, strategies, and resources to creating social presence in an online environment. This design was chosen because the qualitative data in the second part of the questionnaire will help understand, dive deeper, and explain the quantitative results (Creswell, 2018). The study will connect the quantitative and qualitative data together. The strength of this design is being able to follow up with in depth qualitative results by additionally asking specific open-ended questions to further explain and explore how the variables interact more in depth. It will help further understand why respondents answered the way they did. Overall, using the convergent

mixed research method will help get a more detailed picture and how context can influence outcomes (Creswell, 2018).

Participants

The participants are licensed classroom teachers who work with students in grades kindergarten to twelfth grade. This includes general education teachers, special ed, physical education, music, English language teachers, and long-term substitute teachers. The participants overall will be teachers that teach in class sizes higher than 2. All participants work for Osseo Area Public School District in the Distance Learning Academy (DLA). There are around 225 licensed teachers in the DLA. Participants were selected because they teach at the K-12 level and have taught virtually 100% this school year (2020-2021). Hybrid elementary teachers were not chosen because they only partially taught virtually, as well as elementary school's hybrid model going back 100% in person in February 2021. DLA teachers fit closer to the study because they taught virtual consistently full time through the entire school year. Teachers were pulled from the 23 K-12 brick and mortar schools in the district (Maple Grove, Brooklyn park, and Osseo). Some voluntarily chose to teach in the distance learning academy, and others were pulled involuntarily based on seniority.

Setting

The Distance Learning Academy was a brand new 100% online K-12 school that was developed in the district for the 2020-2021 school year in response to meet Minnesota's Covid-19 guidelines. Students were able to opt into the Distance Learning academy (DLA) in August for the entire school year as the other option would be the hybrid model (combination of in person and virtual teaching). Some students were able

to opt into the DLA later in the school year as well as go back to the hybrid model. DLA teachers taught synchronously (live google meets) and asynchronously (through the seesaw app, Schoology, videos, etc.). All teachers teach from their homes or other places.

Data Collection and Methods

I will be using mixed methods: qualitative and quantitative data in one phase. I will be using a similar design to Richardson's study in 2003 and Gunawardena's study in 1997. They both did open ended and closed question questionnaire using the Likert scale to measure perceived social presence of the students who took online. Gunawardena studied social presence and learner satisfaction and Richardson studied perceived learning and social presence. The questionnaire was inspired by their questions, but they will be geared towards K-12 teachers. The qualitative questions in the survey will be highly similar to Lawrence's study in 2020 on measuring Culturally Responsive Teaching practices/ collaborative online learning environments. Lawrence surveyed teachers on culturally responsive teaching practices and pulled 4 teachers based on the survey answers to interview further and explore best strategies and practices.

Questionnaire

This next section will go into detail of the questionnaire. The questionnaire was sent to around 225 k-12 100% virtual teachers in the DLA through their district email in early June. Teachers had the option to participate or not participate, and had 3 days to fill it out. 78 teachers ended up participating in the study. The questionnaire was a google form. A Likert scale (1-5) is used for the majority of the questions. There are also 4 open ended qualitative questions at the end asking about tools and strategies the teachers used to create an environment with perceived social presence. The sole purpose of the

questionnaire was to analyze teachers' classroom environments. The questionnaire measured teachers perceived social presence environment in their classroom, comfort, perceived learning, and collaborative learning strategies. Below are the questionnaire questions.

- Do you want to be a part of the drawing for a chance to win a \$25 gift card to Target? If so, please type your email address. If not, put NA
- What do you teach? (elementary students, middle school students, high school students)

Below are the 9 Likert scale questions. The first 7 questions measured overall perceived social presence in teacher's online setting. Question 8 and 9 measure overall perceived learning.

Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

Perceived social presence questions:

1. Online learning is impersonal as compared to face-to-face instruction (Gunawardena 1997). (reverse coded- 1 = strongly agree 2 = agree 3 = neutral 4 = disagree 5 = strongly disagree)
2. Digital learning is an excellent medium for social interaction (Gunawardena 1997).
3. Students see each other and perceive everyone as real, not abstract anonymous persons.
4. Online learning enables students to make close and caring friendships with others (Tu & Yen, 2008).

5. Students seemed comfortable with the online communication styles and actively interacted with other students in the class (Gunawardena, 1997).
6. In online learning environments, students can convey meaning and emotion, and students are able to express themselves (Tu & Yen, 2008).
7. While teaching virtually, students often collaborate and work together on a variety of activities and projects.

Perceived learning and achievement questions:

8. Quality of learning is excellent in online learning settings (Richardson, 2003).
9. Students are excelling/progressing academically in online settings similar as to in person learning.

To find strategies and tools teachers used to create a strong social presence learning environment in an online setting, four open ended questions were asked. The questions are below.

Open ended qualitative questions

1. What was your biggest highlight in building social presence in your online classroom?
2. What was your biggest lowlight in building social presence in your online classroom?
3. Which digital tools or activities (for example: Jamboard, breakout rooms, group games, group projects) helped promote social presence and student's learning and why? Which ones did not?
4. How do you build community online (facilitate cultural responsiveness)?
(Lawerance, 2020)

The google form will be attached below in the appendix.

Data Analysis Methods

The quantitative and qualitative data will be analyzed. For the quantitative data on the questionnaire, each answer will be connected to a number on the Likert scale to measure social presence and its effect on learning. Teachers perceived social presence score in their online learning environment will be compared to student learning. Gunawardena and Richardson used Cronbach alpha to estimate the reliability of a score. This statistical analysis tool will work well for this study because there are multiple items used to measure teachers perceived social presence. Student relationships, student-student collaboration, sociability, and comfort combined measure social presence as a whole in a classroom. Cronbach alpha will be used to measure consistency within the scores and will be compared to learning outcomes. Pearson R correlation coefficient will also be used to look for trends between the two variables: perceived social presence and perceived learning. There are also four qualitative questions on the questionnaire. All of the answers will be analyzed in chapter four to find best practices to creating strong learning communities and relationships where students are collaborating together on a variety of activities and projects. Qualitative data will be used to look for best teaching practices for creating social presence environments in online learning classrooms. The answers to each question will be analyzed to look for themes. Recurring themes that connect to the quantitative questions as well as new themes will also be analyzed. The answers to each of the questions were printed out and sorted into the different themes found. Count and percent of each recurring theme will be analyzed.

Human Subject Research

All teachers who decide to participate in the research study will sign a consent form. The consent form includes the reason and the purpose for the study. It also indicates that their participation is voluntary, and participants can back out at any point during the study. All data collected from the questionnaire will be kept private and anonymous. No private information such as names will be collected in the questionnaire. The consent form will mention costs such as loss of time filling out the questionnaire (10 minutes). Participating in the study will have no effect on teacher's evaluation or employment at Osseo Area School district. Consent to push out the questionnaire to Osseo employees has been achieved by the learning and achievement director. This research study went through the IRB application process. The research was submitted including the purpose, research tools such as survey and interview questions, as well as the consent form. The IRB reviewed the application and approved the research which ensured accordance with federal regulations.

Conclusion

In this chapter, the method: convergent mixed methods approach was discussed. Questions from the questionnaire will be inspired and based off past researchers who have studied social presence theory in online social environments. The qualitative questions will be used to explain and further explore the results. Chapter four will include the results from the questionnaire. Analysis of quantitative and qualitative data will be conducted. At the end of the study, end goals will be to find out if social presence in online learning environments increases learning outcomes and to find best teaching practices for engaging online learners.

CHAPTER FOUR

Results

Introduction

The purpose of this study is to explore online teaching communities and how they relate to achieved learning in order to discover best teaching practices in creating strong relationship based online communities with student-student collaborative learning activities. Because of covid-19 during the 2020-2021 school year, many K-12 schools have adopted online schools which is something many teachers or districts have ever done before. To find out more about effective online learning environments, the research questions being investigated are: how can K-12 teachers create a synchronous online environment where students have a social presence in the classroom? Did social presence in an online environment result in higher academic achievement? I am investigating social presence in online synchronous K-12 classrooms because I want to find out the effect it has on engagement in the classroom and whether social presence yields higher academic achievement. The study was a mixed methods design with quantitative and qualitative data. The quantitative data will analyze the correlation between the two variables: perceived social presence and perceived learning. The qualitative data will look for main themes by paraphrasing the most common things teachers said per question.

Quantitative Data

The research design used in the study is a convergent mixed methods design. An email was sent to all teachers that taught virtually the entire year to fill out a 13-item questionnaire which included 9 questions on a Likert scale 1-5 and 4 open ended

questions. Teachers had 3 days to fill out the questionnaire for a chance to win a \$25 gift card to Target. By the end of the third day, 78 responses were collected.

The answers to quantitative questions, which were on a Likert scale: 1 Strongly disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree, were tallied. The questions are listed in Table 1 below. Question number one is reverse coded. Questions number 1-7 measure the variable perceived social presence in the teacher's classroom. Question 8-9 measure the teacher's perceived student learning.

Table 1

Quantitative Questions Likert Scale 1-5

Question	
	Measures Perceived Social Presence
1	Online learning is impersonal as compared to face-to-face instruction.
2	Digital learning is an excellent medium for social interaction.
3	Students see each other and perceive everyone as real, not abstract anonymous persons.
4	Online learning enables students to make close and caring friendships with others
5	Students seemed comfortable with the online communication styles and actively interacted with other students in the class.
6	In online learning environments, students can convey meaning and emotion, and students are able to express themselves.
7	While teaching virtually, students are able to often collaborate and work together on a variety of activities and projects.
	Measures Perceived Learning
8	Quality of learning is excellent in online learning settings.
9	Students are excelling/progressing academically in online settings similar as to in person learning.

Percent and Themes.

Table 2 show the counts for each question per each Likert term and percent.

Below Table 2 will include key findings per each question as well as a bar graph comparing the answers as a whole of each question.

Table 2*Count and Percent of the 9 Quantitative Questions*

Likert Term	Perceived Social Presence					Perceived Learning			
	q1	q2	q3	q4	q5	q6	q7	q8	q9
Count N=78									
Strongly Agree	6	0	10	3	7	10	11	5	10
Agree	28	19	39	25	37	47	31	26	26
Neutral	13	26	15	19	17	10	23	35	20
Disagree	26	28	14	23	12	10	12	10	17
Strongly Disagree	5	5	0	8	5	1	1	2	5
Percent %									
Strongly Agree	8	0	13	4	9	13	14	6	13
Agree	36	24	50	32	47	60	40	33	33
Neutral	17	33	19	24	22	13	29	45	26
Disagree	33	36	18	29	15	13	15	13	22
Strongly Disagree	6	6	0	10	6	1	1	3	6

Below is a bar graph (Figure 1) comparing the answers as a whole of each question. It shows per each question the trend of teachers having either a more “positive” answer (agreeing or strongly agreeing) colored green or the trend of teachers answering more “negative” (disagreeing or strongly disagreeing) colored red. The next section will include key findings of the percent chart and the bar graph below. Questions eight and nine were lightened because they are measuring perceived learning in the classroom while questions one-seven are measuring perceived social presence in the classroom.

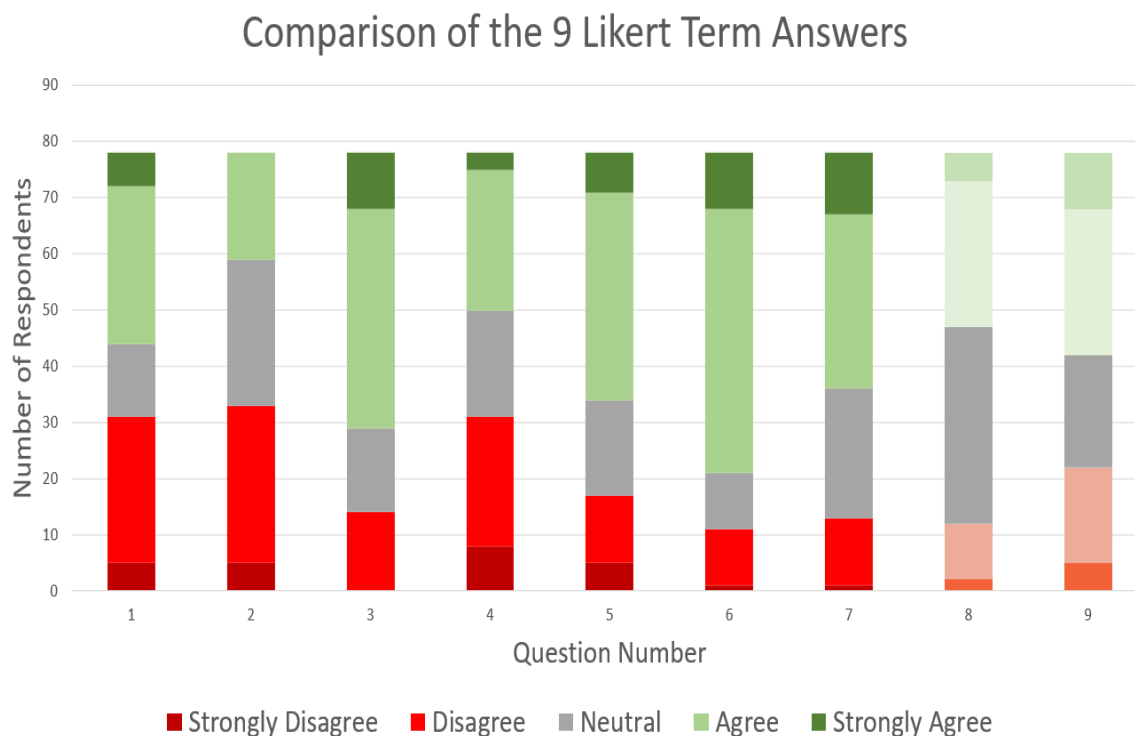


Figure 1: Comparison of the 9 Likert Term Answers

For question three, five, six, seven, eight, and nine, more teachers agreed and strongly agreed than disagreed and strongly disagreed. More teachers agreed that students perceive each other as real, students are comfortable with online communication styles and interacted with other students in the class. More teachers also agreed that students can convey meaning and emotion and express themselves, often collaborate and work together, quality of learning is excellent, and students are excelling/progressing academically in online settings. Questions eight and nine are specifically measuring teacher perceived learning happening in the classroom. They have similar trends to many of the questions that are measuring perceived social presence. Number eight (measuring perceived learning) had the most neutral responses. Questions 3, 5, and 6 had the strongest trends toward agree and strongly agree. The themes in these questions were: students perceiving everyone as real, students were comfortable and often interacted, students are

able to convey meaning and emotion and are able to express themselves. Social presence theory is measured by a variety of variables. It was interesting that 3,5, and 6 were the strongest. Questions 3 and 6 specifically measure sociability while 5 measures the comfort of the students communicating online.

Overall, question one, two, and four tended to have more responses that disagreed with question one being reverse coded. More teachers agreed that online learning is impersonal, disagreed that online learning is an excellent medium for social interaction, and disagreed that online learning enable students to make close and caring friendships with others. Number four responses were surprising. Many teachers disagreed that students created friendships with each other. A few responses in the qualitative questions mentioned students coming from many different schools and they did not know each other which could have contributed. Some teachers mentioned specific students never turning on their cameras, mics, or missing class completely which are also factors. Although these questions had responses that mostly disagreed, the responses were mostly neutral. Questions one and four were the closest. There is close to an equal amount of disagree responses as agree with the neutral spread of responses being towards the middle. Below is a breakdown of key facts for each question in numerical order.

- Question one: online learning is impersonal as compared to face-to-face instruction.
 - The majority of teachers answered agree, neutral, or disagree, with agree at the highest (36%) and disagree second highest (33%).
 - After going through all strongly agree/agrees, strongly disagrees/ agrees, and neutrals, this is another way to present the results: looking at the ration

between the green and the red: The range of responses is spread out between teachers agreeing or disagreeing.

- Question two: digital learning is an excellent medium for social interaction,
 - Disagree was the most popular choice at 36%. Neutral was also a popular choice at 33%.
 - The range of responses is slightly more towards disagreeing.
- Question three: students perceive each other as real, not abstract anonymous persons,
 - The most popular response was agree at 50%.
 - More teachers agreed and strongly agreed than disagree and strongly disagree.
- Question four: Online learning enables students to make close and caring friendships with others.
 - Overall, agreeing and strongly agreeing received close to equivalent responses to disagreeing or strongly disagree.
 - 10% of teachers strongly disagreed which is the highest strongly disagree answer in comparison to all the questions.
- Question five: Students seemed comfortable with online communication styles and actively interacted with other students in the class.
 - 47% of teachers agreed with the question which was the highest of all the Likert terms.
 - There were more responses of agree and strongly agree than disagree and strongly disagree.

- Question six: In online learning environments, students can convey meaning and emotion, and students are able to express themselves.
 - 60% of teachers agree which was the highest agree answer in comparison to all 9 questions.
 - There were more responses of agree and strongly agree than disagree and strongly disagree.
- Question seven: while teaching virtually, students often collaborate and work together on a variety of activities and projects.
 - 40% of teachers agreed which was the highest in responses. 14% strongly agreed which was the highest out of all nine questions.
 - More teachers responded as agree and strongly agree then disagree and strongly disagree.
- Question eight: Quality of learning is excellent in online learning settings.
 - 45% of teachers responded neutral which was the highest responses. It was also the highest neutral responses out of all the questions.
 - Although there are more responses that agree and strongly agree, then disagree and strongly disagree, the high number of neutral responses is significant. Many teachers neither agreed or disagreed.
- Question nine: students are excelling/progressing academically in online settings similar as to in person learning.
 - 33% of teachers agreed which had the highest responses per the question.
 - More teachers agreed and strongly agreed than disagree and strongly disagree.

Pearson R Correlation Coefficient.

The two variables being compared are teachers' overall perceived social presence and their perceived learning that is happening in their online learning environment. To measure the two variables, the average of questions one through seven was taken to measure teachers perceived social presence in their classroom (x axis) and the average of question eight and nine was taken per each respondent in order to measure perceived learning (y axis). Below is a graph (Figure 2) of all seventy-eight respondents averages of the two variables. One dot on the graph represents one respondent.

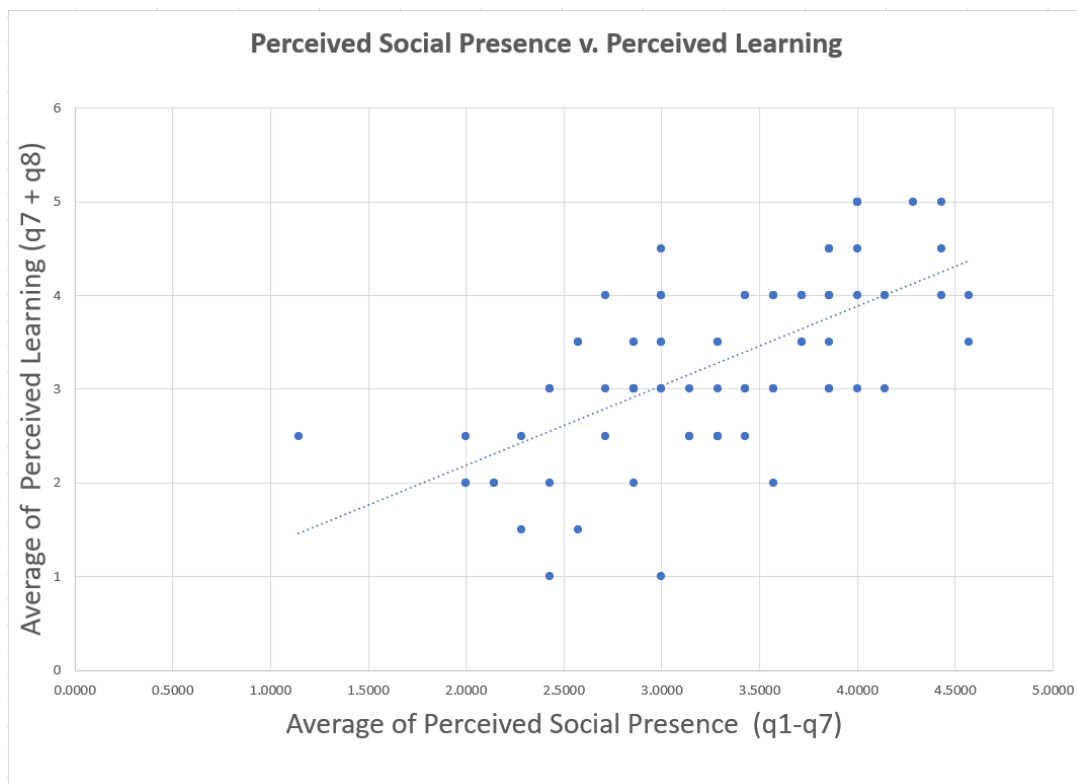


Figure 2: Perceived Social Presence v. Perceived Learning

The Pearson r correlation of the variables: average of perceived social presence and average of perceived learning had an overall correlation of .65 for all 78 respondents. .65 is a slight correlation meaning the more a teacher agrees that there is a social presence

in their classroom, the more likely they will agree that students are learning and progressing academically in online settings. Also, the more a teacher disagrees that there is social presence in their online classroom, the more likely they will disagree that students are learning nor progressing academically. The Pearson correlation coefficient was also split apart and taken between the different grade groups of students at the elementary, middle school, and high school level. Below is Table 3 comparing the Pearson r correlation coefficient at the different grade levels as well as the graphs of the averages of the 2 variables.

Table 3

Pearson R Correlation Coefficient

Schools		
	Correlation	Count
All	0.65	78
Elementary	0.59	46
Middle School	0.67	17
High School	0.72	15

Overall, the correlations across the schools were similar. One thing noticed is that the correlation is stronger at the high school level, while elementary has a significant correlation, it is still the lowest of the three schools. A speculation could be is that the high school students are older and had more time to practice using technology than younger elementary students. Another speculation could be is that high school students are older and more independent than elementary students. More of the teachers that responded were elementary teachers making the correlation coefficient of 0.59 slightly stronger and more significant. Below are the graphs measuring social presence and perceived learning at each grade level group for reference.

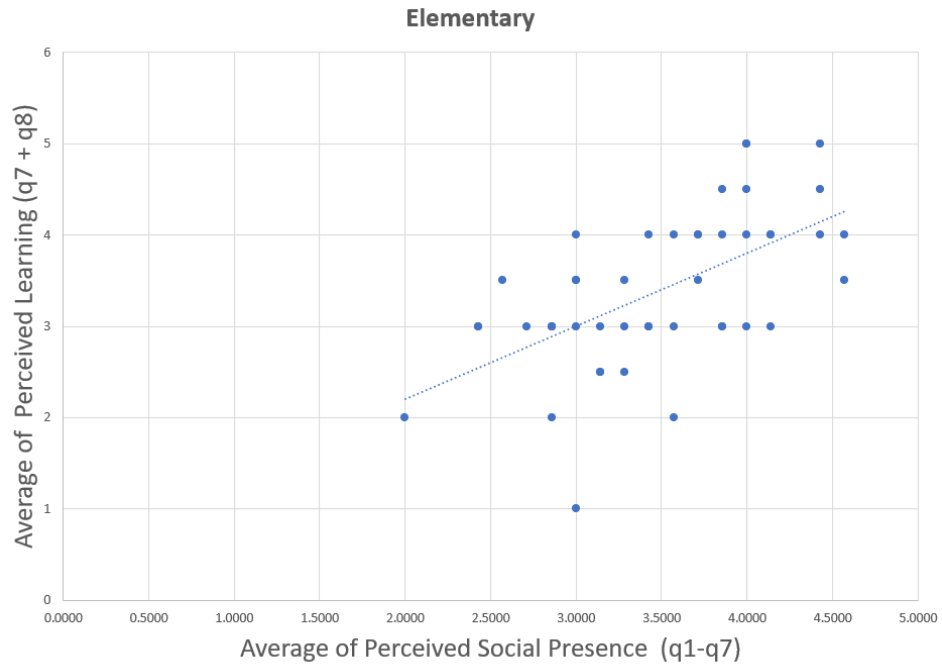


Figure 3: Elementary

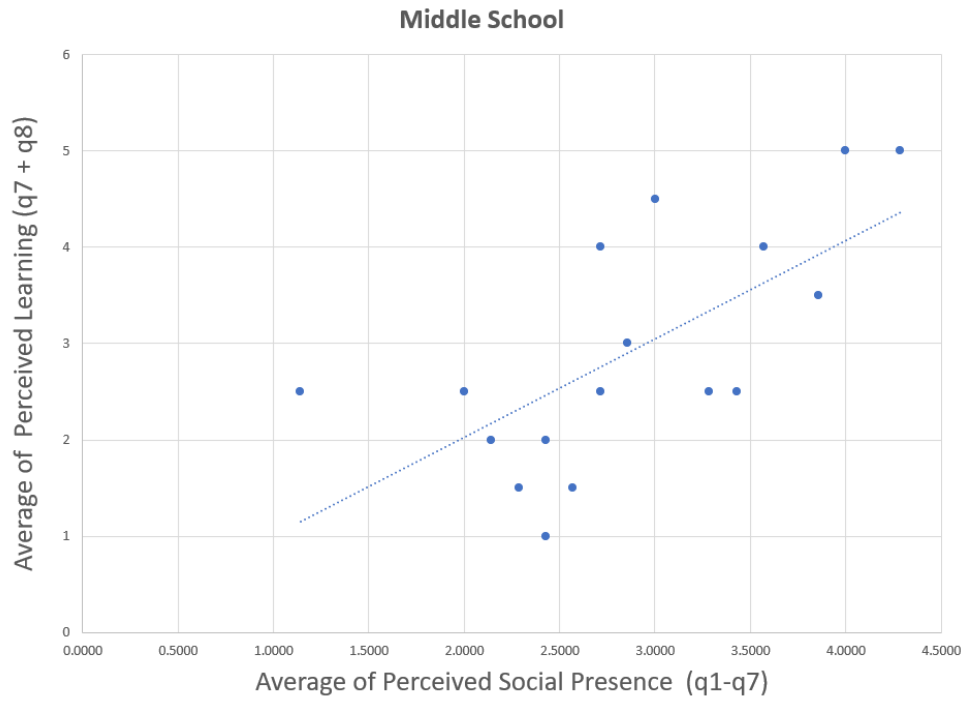


Figure 4: Middle School

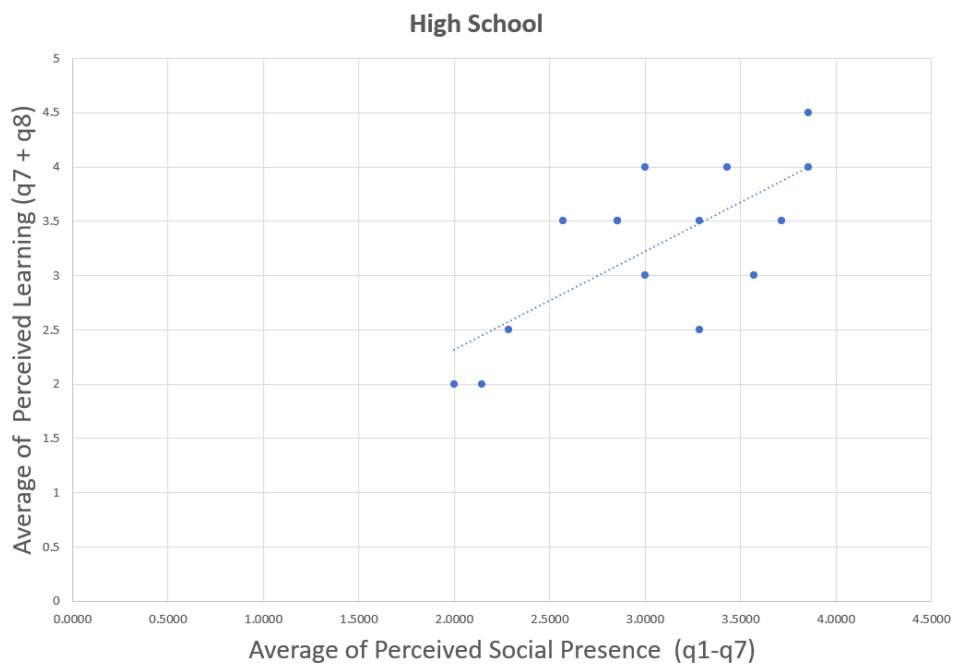


Figure 5: Highschool

Cronbach Alpha Internal Consistency.

To measure how related all nine questions are in the questionnaire, Cronbach alpha will be used to measure internal consistency or coefficient of reliability of the questionnaire. Cronbach alpha is used to see if multiple questions on a Likert scale survey are reliable. It will show if the questionnaire is designed to accurately measure the variables perceived social presence and perceived learning. This test has also been used by many other researchers studying social presence theory as many of my Likert questions have been inspired by them. Cronbach alpha is a number between 0-1. 0.7-0.79 is considered acceptable, 0.8-0.89 is considered good, and 0.9-1 is considered excellent.

To find Cronbach alpha, the variance for each question needs to be found. The variance for each question is $q1=1.25378$, $q2=0.7996384$, $q3=0.859467$, $q4=1.168968$, $q5=1.105358$, $q6=0.797666$, $q7=0.91667$, $q8=0.74096$, $q9=1.261177$. Next, the sum of the total score for each respondent was found between the 9 questions. Then, the variance of the total score of respondents was found which equaled 39.46746. Below is the table of the other items found: number of items/ questions, sum of the item variance (sum of the pink numbers above), and variance of total score.

Table 4

Cronbach Alpha Internal Consistency

Description	Values
# of items	9
Sum of item variance	8.9037
Variance of total score	39.4675
Cronbach's Alpha	0.8712
Internal consistency	Good

Once all the information needed is found, Cronbach alpha = (number of items / (# of items – 1)) * (1 – sum of item variance / variance of total score). Cronbach alpha = .8712. This is a relatively high internal consistency. Anything below .7 is questionable. 0.8712 means that the questionnaire's internal consistency is good and is accurate in measuring the variables of interest. With the responses given, The Likert questions in this study passed Cronbach alpha internal consistency. This means on average teachers answered the questions consistently in relation to each other. The next section will analyze the four qualitative open-ended questions

Qualitative Data

At the end of the questionnaire, there were four open ended questions where teachers could elaborate on their experience of teaching students for the first time in a virtual environment. Here are the four questions that were asked:

1. What was your biggest highlight in building social presence in your online classroom?
2. What was your biggest lowlight in building social presence in your online classroom?
3. Which digital tools or activities (for example: jamboard, breakout rooms, group games, group projects) helped promote social presence and student's learning and why? Which ones did not?
4. How do you build community online (facilitate cultural responsiveness)?

Also, the themes of the quantitative Likert questions are below. There were many connections to the qualitative and quantitative questions based on these themes.

1. Online learning is **impersonal** as compared to face-to-face instruction.
2. Digital learning is an excellent medium for **social interaction**.
3. Students see each other and **perceive everyone as real**, not abstract anonymous persons.
4. Online learning enables students to make **close and caring friendships with others**
5. Students seemed **comfortable** with the online communication styles and **actively interacted with other students** in the class.
6. In online learning environments, students can **convey meaning and emotion**, and **students are able to express themselves**
7. While teaching virtually, students are able to often **collaborate** and work together on a variety of activities and projects.
8. **Quality of learning** is excellent in online learning settings.
9. Students are **excelling/progressing academically** in online settings similar as to in person learning.

Figure 6: Quantitative Questions- Highlighted Themes

To find themes in the qualitative data, each response was printed out per question. Within each question, common themes were looked for and responses and sorted based on similarity. For some of the responses, teachers sometimes stated points that fit into different themes. When this was the case, the teacher's answer was cut and split into the appropriate categories. Below is an example of the sorting process of one of the questions.

Afterwards, the different themes found were tallied up and the percent and count were found for each theme per each question. Each theme found will be summarized in a paragraph of the most common things that teachers said per that theme. There are four qualitative questions that will be analyzed below.

The first open ended question asked in the questionnaire was: what was your biggest highlight in building social presence in your online classroom? After sorting responses from the teachers, the following themes were found: classroom environment, friendships/relationships, games/sharing. The next few paragraphs will summarize the different themes found and responses by the teachers.

Table 5

Question 1: What was your biggest highlight in building social presence in your online classroom?

Themes	Count	Percent %
Games/ Sharing	25	32
Classroom Environment	22	29
Friendships/ Relationships	19	25
Small Groups/ Breakout Rooms	11	14
Total	77	100

Games/Sharing. Students sharing and playing games came up most frequently in teacher's responses (32%). Daily sharing routines built into the day such as morning meeting, advisory time, or Friday story book reading with the expectation that each student will share their answer to the question or thoughts on the quote allowed 100% participation. Using the chat feature gave students an additional form of communicating and sharing with their classmates. Classmates could help answer other students' questions. Playing games like blocklet added a different element of competition. Getting to know students through flip grid intro videos, all about you slide decks, and lots of discussion boards was a highlight in building social presence. Playing Jeopardy for test reviews helped with engagement. Warm up activities such as Happe dance, Friday fun each week and sound effects were also games and sharing activities mentioned. When asking sharing questions or finding a common area for a topic, using the hand signal when other students had a connection helped. More students found they had many things in common and felt more socially connected to their classmates and felt more comfortable sharing. Daily questions such as either-or questions, open ended, or silly was a highlight. Sharing favorite toys and doing scavenger hunts with the students got students engaged and excited about online learning. Using student voice and choice when

sharing such as sharing pictures, stories of what they are doing or working on outside of school as part of an assignment helped build social presence and was a highlight.

Classroom Environment. Many of the teacher responses had a theme relating to classroom environment (29%). One common thing mentioned by teachers was being their authentic selves and students being authentic with each other. One teacher mentioned sharing their struggles with teaching helped student open up about sharing their struggles that created a positive relationship. Teaching from our homes and students learning from their homes created a more authentic environment. Teachers and students saw each other's lives: toddlers running around in the background, seeing each other's families, and cats jumping on desks. Teachers and students knew each other on a personal level. The word safe popped up often in teacher responses. Teachers mentioned the role of the teacher and facilitating a classroom environment in conversation where students feel safe in an online environment and students trust one another and are confident and willing to take risks. Creating an atmosphere where students were confident and persevere when doing difficult tasks online was important. Creating an atmosphere where students could communicate in other ways where they felt comfortable such as the chat feature or using Jamboards helped.

Friendships/Relationships. Another theme that was common in responses was friendships/relationships (25%). Creating and continuing to build strong positive relationships with students was mentioned frequently. Some teachers mentioned because students had a positive relationship with their teacher as well as peers, students were more willing to make mistakes and were eager to interact with each other even if their cameras were off. Students would pop onto the google meet just to chat. Students

expressed interest in learning, and spoke to the teacher and each other. Finding moments to do more than just academics helped build positive relationships. A couple respondents mentioned growing friendships witness throughout the year, and then witnessing it in person when the teacher had a park playdate with the class. Students would encourage and help their classmates. There was less fighting and problems between students one respondent mentioned. Overall, kids were able to make friends and build relationships in a digital format.

Small Groups/Breakout Rooms. Another theme that was a highlight of building social presence was small groups or breakout rooms (14%). Teacher respondents mentioned that small groups, one on one, or breakout rooms allowed more time for students to connect with their teachers and peers. Students were able to talk more with each other and get to know one another. Having one on one meetings with students or check-ins was a highlight of building social presence. Having weekly lunch groups helped students get to know one another. Students got a lot of work done in breakout rooms which was reported by a high school teacher and built relationships. Allowing more time for breakout rooms and building on their friendships was important in a virtual environment.

Lowlights in Building Social Presence

Below is the chart for the most common themes that participants mentioned in Question two: What was your biggest lowlight in building social presence in your online

classroom. The next sections will summarize what the teachers said about each theme.

Table 6

Question 2: What was your biggest lowlight in building social presence in your online classroom?

Themes	Count	Percent %
Google Meets	19	23
Attendance	18	21
Trust/ Friendships	13	15
Collaboration/Play	11	13
Breakout Rooms	7	8
Other	16	19
Total	84	100

Google meets. 19 teachers (23%) mentioned that google meets was a lowlight in building social presence in online classrooms and was the most common theme. Teachers mentioned that students could easily turn their mics and cameras off and disengage from the group. Students would do it sometimes and others never turned cameras or mics off the entire year regardless if the teacher asked to turn it on countless times. Some students would log out before the class was dismissed a miss directions or parts of the lesson. Teachers wrote that it was harder to read expressions and body language on a google meet than doing class in person. One teacher wrote “Feeling like I was teaching in a blacked-out cruise ship... I knew the ‘PE’ was ‘here’ somewhere... just not really sure ‘where’...LOL”.

Attendance. 18 teachers (21%) reported that attendance was an issue in building social presence in their classroom. Teachers said it was hard to get some students to regularly come to class which made it hard to connect to those students. A teacher mentioned that the younger students who could not tell time had a hard time

remembering to come to class. Towards the end of the year, a few reported that students started to attend less. Students not attending caused a lot of worry and made it hard to build community. In Minnesota due to the covid-19 pandemic, attending one class a day or turning in an assignment counted as present for the entire day. This could be the reason why some of the students were not attending as often.

Trust/Friendships. 13 teachers (15%) reported struggles of establishing trust or students creating friendships with their peers in an online learning environment.

Participants wrote that some students felt uncomfortable talking through google meet because they did not know who may be listening in the background versus a closed classroom door in person. Many of the students did not know each other because they all came from different schools. Some students would interact only with the teacher and not each other. Some students would not talk or share ideas unless the teacher was present. Teachers reported that learning through google meet was not the best for shy students and they had a harder time engaging. Some students were too shy to turn on their cameras or unmute. Overall, some students felt uncomfortable learning online.

Collaboration/Play. 11 teachers (13%) wrote about students collaborating with each other or “play” was hard to do in an online learning environment. Some students struggled with interacting with each other and could not work together with the same ease as in person learning. A teacher wrote that students did not have enough opportunities to play with each other. “I teach the first grade and much of our day was spent playing games with small groups or partners. Students did not have as many opportunities for this type of learning in an online format”. Turn and talks took much longer to complete

because of breakout rooms. Teachers mentioned that it was hard to find ways for students to collaborate or play together without the teacher present.

Breakout Rooms. 7 teachers (8%) mentioned breakout rooms being a lowlight in building social presence. Teachers overall mentioned it was hard making breakout rooms a safe and fun space. One teacher wrote that when they would enter the breakout room, and cameras and mics would be off. Students would be silent with each other unless the teacher was there asking questions. Some students would only communicate through the chat in breakout rooms which made it harder. Overall, it was hard to facilitate and oversee small groups and their relations. Some students had a hard time with breakout rooms and it was hard to intervene then to observe from a distance easily if the teaching environment was in person.

Other. 16 teachers (19%) wrote about other things about lowlights of building social presence that did not relate to the recurring themes. Teachers wrote that it was sad not being able to see them in person and it was not the same. A few teachers wrote that it was hard to help them with their seesaw work than helping them physically together. There were less teachable moments while students were working. Teachers mentioned that miscommunication was a lowlight which was caused due to technology issues. Some students did not have a dedicated space to do their school and some would often become distracted or disappear from the room. A teacher mentioned not being knowledgeable in technology was a huge barrier when teaching online.

Tools

The 3rd question that participants were asked to answer was: which digital tools or activities (for example: Jamboard, breakout rooms, group games, group projects) helped

promote social presence and student's learning and why? Which ones did not? Below is the chart of tools that teachers listed that were either useful or not useful.

Table 7

Question 3: Which digital tools or activities (for example: Jamboard, breakout rooms, group games, group projects) helped promote social presence and student's learning and why? Which ones did not?

Themes	Count	Percent %
Useful Tools		
Breakout Rooms	52	19
Games	48	17
Jamboard	39	14
Share/ Live	27	10
Kahoot	18	7
Peardeck	9	3
Group Projects	9	3
Google Meets	8	3
Discussion Posts (Not Live)	6	2
Whiteboard Apps	5	2
Quiz	5	2
Lunch Bunch	5	2
Nearpod	5	2
Blooklet	5	2
Polls	4	1
Flipgrid	4	1
Small Groups	4	1
Classkick	3	1
Creative Play	3	1
Seesaw	3	1
Other	14	5
Total	276	100
Not Useful Tools		
Breakout Rooms	9	33
Group Projects	8	30
Jamboard	7	26
Online Discussions	2	7
Seesaw	1	4
Total	27	100

Useful tools. The top tools that teachers found useful were breakout rooms, games, jamboard, sharing live, and kahoot. Breakout rooms being the top tool was not surprising but also surprising. The whole online school used google meets and breakout rooms is a function of google meet. A common theme in the lowlights of building social presence was also breakout rooms. Some teachers wrote comments about the games they played. Teachers used games to promote building relationships with their peers and creating community. It gave students more chances to interact with each other. More voices were heard and there was more engagement. It promoted students to keep their cameras on and participate. One teacher mentioned to start with low-risk games at first. A couple of games that teachers mentioned was: this or that, would you rather, brain teasers, review games, and jeopardy. Overall, games were very impactful.

Sharing live was also a popular response by participants. Teachers wrote about doing things live such as drawing together or writing together was a great strategy in building social presence. A teacher mentioned they used friendly debates in their classroom. Sharing books they read, asking goofy questions, and doing daily check ins live were helpful things. Many teachers mentioned having an open chat each day helped promote social presence. Doing an intro to self-slide activity helped the students get to know each other better. Overall, sharing live helped build social presence in an online learning setting.

Other was a section where the tool was mentioned 2 or less times. The tools that were useful mentioned were: Padlet, boom learning cards, gimkit, gizmos, desmos, email/text, guided reading and math, art lessons, word wall, bongo cat, and playxylo. 5 teachers mentioned white boards, and found there are many different kinds.

WhiteboardFX, HP whiteboard, whiteboards.fi, and whiteboard.com was mentioned as useful tools.

Not useful tools. There were 27 responses of tools that were not useful in building social presence in an online environment. Less teachers reported not useful tools than useful (276). Breakout rooms, group projects, Jamboard, online discussions, and seesaw were all reported as not useful. These tools were also mentioned as useful. Many teachers who reported not useful tools provided an explanation of why the tool was not useful. Breakout rooms did not work well because students would not interact when the teacher left or would just log off. Students would turn their cameras and mics off in breakout rooms. Students struggled to interact with each other in breakout rooms. Teachers reported Jamboards being not useful because it caused frustration and was a challenge for students to use because students were able to move things around and would play with the tools. It would also sometimes lead to silent engagement.

This question provided a lot of tools or strategies that either helped promote social presence in the classroom or didn't. Due to the number of tools mentioned, it seems that many teachers used what worked best for their classroom. These tools were also reported from a variety of teachers who teach at different grade levels or different subjects. One tool might work well for one classroom or subject, but not others. The next section will analyze the fourth and final open-ended question asked in the questionnaire based on building community online.

Building Communities Online

The fourth and final question asked on the questionnaire was: How do you build community online (facilitate cultural responsiveness)? Below is the chart with the most common themes found in the teachers' responses. Each theme will be analyzed below.

Table 8

Question 4: How do you build community online (facilitate cultural responsiveness)?

Themes	Count	Percent %
Share	33	36
Welcoming Space/ Routines	25	27
Real/ Representation/ Authentic	23	25
Tools	7	8
Difficulties With Communities	3	3
Total	91	100

Share. 36% of the responses had a theme about sharing when building a community in an online setting. Teachers wrote finding ways that encourage students to share their opinion helped create community. Student input on the lesson/game, polls and Jamboards where students feel comfortable not having to unmute was important when sharing out. The consistency having a morning and closing meeting where all voices are heard everyday was important in online learning. This helped get to know students' backgrounds, strengths and needs. Having social time in breakout rooms with no agenda and giving chances to make connections with other kids that was outside of learning time was important. Some teachers mentioned that it is a slow process due to the extra time with technology and to use wait time. Checking in on students' feelings to see how they are doing and being real and willing to share about yourself. Students are more open to sharing about themselves when the teacher shares. Sharing student work was important.

Overall, the teacher being intentional about interpersonal discussions helped build community online.

Welcoming Space/Routines. 27% of responses had a theme of welcoming spaces and having routines in a virtual online environment. Overall, creating a space where students feel welcome such as celebrating cultures and traditions within the students' homes. Observing AAPI month, lunar new year, black history, and woman's history month were also reported as important where students can relate, feel welcome, see themselves in school. It was important to intentionally create an environment where students are free to express themselves and putting in an effort where students feel safe. Routines such as morning and goodbye songs, expectations such as listen and cameras on during live meets, and making eye contact into the camera was important in building community in the classroom. Another routine that was mentioned was to say their name every day and have the students say hello to each other. It was important to value students' thoughts feelings and ideas. This was done by giving praise, commenting on student work. As the teacher it was important to be easily contacted by students and parents, providing choices within the assignments, using humor, and intentionally making mistakes. Every once in a while, having lunch with the students helped build community, celebrating birthdays, and asking students questions to check in such as: "how much energy do you have today? How well do you understand the activity?". Giving students chances to speak anonymously helped with participation and teaching students to give respectful feedback and responses to each other helped build community. Overall, intentionally being happy, free, easy going, and being aware of interactions and who your

students are and how there are doing helped build community and be culturally responsive in the classroom.

Real/ Representation/ Authentic. 25% of teacher responses contributed to the themes of being real, having representation in the classroom and being authentic in order to help build community and be culturally responsive in the classroom. As the facilitator of the classroom many teachers reported the importance of being open, having real conversations, and being your authentic self. Setting guidelines, having two-way respect by setting expectations for how we treat others and stick with them. It is important to create expectations starting from a place of empathy. Overall, celebrating student differences helped with confidence, doing gallery walks where students could share work and give feedback to each other, and using books during the lessons that students can connect with. Overall, promoting and validating students lived experiences, being your real and goofy self with the students helped build community in teachers' online classrooms.

Tools. Some teachers mentioned specific tools on how they build community and are culturally responsive when being a facilitator of an online teaching environment. Teachers used Jamboards, polls, and breakout rooms. A couple teachers mentioned using NUA strategies, community building activities, and time for social conversation. One reported using books and resources that reflected the cultures of the students. Another teacher mentioned leaning on PBSIS and SEL strategies throughout the year.

Difficulties with Communities. Some teachers reported they had difficulties with distance learning and building communities online. A teacher mentioned that they tried to get to know students and check in, but many students still did not participate. Another

teacher said that all their attempts to build community fell flat. They built relationships individually with the student, but the students did not build relationships with each other.

Conclusion

There were overall significant findings in relation to social presence theory and perceived academic achievement in an online learning K-12 environment. Between the nine quantitative questions (seven of them measuring social presence and two of them measuring perceived learning), there was a slight positive correlation between teacher's perceived social presence in their online classroom and teacher's perceived learning. Teachers who agreed that there was a high social presence in the classroom more likely agreed that there was a higher perceived learning. Teachers who disagreed that there was a social presence in their classroom were more likely to disagree that there was perceived learning. Social presence is a combination of strength of relationships, comfort in the classroom, perceiving each other as real, and collaboration within the classroom. These were the most common themes that came up in the qualitative and quantitative results. Some of the teacher's highlights of distance learning were also many of the teacher's lowlights of distance learning. For example, themes that teachers reported that were a lowlight of distance learning was trust/friendships, collaboration and play, and small groups/ breakout rooms. On the other hand, teachers also reported those themes as a highlight of distance learning. There was a wide variety of tools and sources came out of this project that teachers reported. This can be shared for distance learning teachers for next school year. The concluding chapter will include limitations to the research, how the research will be communicated, and how action research impacted me as a teacher.

CHAPTER FIVE

CONCLUSIONS

Introduction

The research questions that were investigated during the study is: How can K-12 teachers create a synchronous online environment where students have a social presence in the classroom? Did social presence in an online environment result in higher academic achievement? The first chapter introduced how I became interested in social presence theory and online learning environments followed by a literature review of the theory: what social presence theory is and importance, how it has evolved, and how to measure it in online learning environments. Chapter three laid out the design of study and the questionnaire questions that were inspired by researchers mentioned in the literature review. Chapter 4 analyzed the quantitative and qualitative results in a variety of ways which found a variety of trends and themes to help promote social presence in K-12 online learning settings. The concluding chapter will include implications for making a better distance learning school for the following year, how the results of the study will be communicated, limitations to the study and recommendations, and how my action research impacted me personally and professionally as a teacher.

Implications for Making a Better Distance Learning School for the Following Year

Many strategies, tools, and ideas were learned last year that can be applied to the following year. Many teachers wrote that there needed to be a stricter attendance policy. When there is a lack of consistency of students coming to class, it is harder to build social presence/ community. Collaboration is a huge part of social presence theory. Many

teachers mentioned the difficulties of students talking with each other without the teacher present and collaborating together on projects. Finding ways where students feel comfortable with each other was found to be highly important to have a successful distant learning classroom and finding collaborative projects that work well in online settings. Spending more time teaching students on how to use technology and attend class online will benefit distance learning students for next year and students would feel more comfortable. Teachers also need to be aware that building social presence in an online teaching setting takes time. Using wait time, being patient with students and starting with more anonymous sharing or low risk games at the beginning of the year was helpful for student comfort. Social presence in an online learning is not going to develop on its own. The sociability that comes naturally in an in person setting needs to be intentionally created by the instructor. As Garrison, Gunawardena, and Tu mentioned in chapter 2, social presence is measured by how much the teacher creates an environment with many social avenues, how much the teacher projects themselves and is real with the students. Being real with students and doing activities that the students can connect with and celebrating differences helps students connect to the learning and each other. Teachers should also collaborate and share the tools and strategies with each other they found useful for creating a social environment last year and apply it to the next school year. The research proved that there are so many tools and strategies out there. Teachers coming together and sharing resources will help everyone.

Communicating the Results of the Study

After the completion of the study and paper, a PowerPoint summarizing key findings with the graphs from the paper will be created to display the project in a

shortened way. The PowerPoint will contain what social presence theory is, the methods, key findings with graphs, and a conclusion. The paper will be attached to the PowerPoint as well for reference. I will send the PowerPoint it to the director of learning and achievement (the person who gave me permission to do the study) and the distance learning principal.

Limitations to the Study and Recommendations

Many of the studies in the literature review studied the students and their perceived social presence of the course. This study only focused on the teachers and their perceived social presence of the learning environment they created. Although there is benefits of studying the teachers' point of view since they are the ones with the power and job to initially create a social collaborative environment, there is still a lack of student voice. This study is based on what the teachers perceive and their opinions, and is not backed up by facts or students' academic grades. A couple ideas for future studies could be to explore students perceived learning and perceived social presence to see their point of view. Another study could be to study students perceived social presence and perceived satisfaction in school.

How My Action Research Study Impacted Me as a Teacher

Overall, doing action research impacted me so much as a teacher as well as growing personally. I spent seven months and countless hours a week working on this project. During that time, I spent the first few months reading and researching ways I could be a better distance learning teacher which inspired me to create my own study based on building social presence and community. It took creativity I never thought I had. Doing an action research study helped me become better at organizing and time

management. This project taught me working on a project with a large scope, pacing myself and becoming an overall better writer. Professionally, I got to hear from a wide variety of teachers of their thoughts, strategies and tools that I can apply to my new position next year. I learned how to work on a project with a lot moving parts involving a lot of people. Overall, the process of doing action research made me a better teacher who strives to be a lifelong learner.

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Appendix

Appendix A: Consent to Participate in Research

Link to the survey:

<https://docs.google.com/forms/d/e/1FAIpQLSfpEqGYQc->

[bYy8gGFE4Ts2fsARUaFxi3rpINJ5qNn9R-pDumA/viewform?usp=sf_link](https://docs.google.com/forms/d/e/1FAIpQLSfpEqGYQc-bYy8gGFE4Ts2fsARUaFxi3rpINJ5qNn9R-pDumA/viewform?usp=sf_link)

You are being asked to participate in a research study. This form provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research participant. You will be provided a copy of this form to keep for your reference.

- If you have any questions about or do not understand something in this form, you should ask the research team for more information.
- You should feel free to discuss your potential participation with anyone you choose, such as family or friends, before you decide to participate.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.
- Your participation is entirely voluntary, and you can refuse to participate or withdraw at any time.

Title of Research Study:

Social Presence Theory: Creating Engaging and Strong Online Learning Communities at the K-12 Level

Student researcher and email address:

Abby Amundson
amundsona@district279.org
aamundson02@hamline.edu
 Phone: 763-257-6272

Hamline Faculty Advisor:

Andreas Schramm
aschramm@hamline.edu

1. What is the research topic, the purpose of the research, and the

rationale for why this study is being conducted?

The purpose of the questionnaire is to determine teachers' perceptions of social presence in their online learning environments and how it relates to academic achievement. We want to know what teachers think about online learning and strategies they have used to create strong relationships and collaborative learning environments. The hope of the questionnaire is to find specific tools and strategies for teachers to use in future online learning environments. We are asking all K-12 educators who teach groups of students to fill out the questionnaire.

2. What will you be asked to do if you decide to participate in this research study?

You will be asked to spend 10 minutes answering questions about your opinions on distance learning and social interaction in a google form. The majority of the questions will be multiple choice and a few of the questions will be open ended.

3. What will be your time commitment to the study if you participate?

The questionnaire will take 10 minutes to complete.

4. Who is funding this study?

The study is being conducted without funding.

5. What are the possible discomforts and risks of participating in this research study?

By participating in this study, there is a small chance of feeling uncomfortable while being asked to answer questions in the questionnaire. The participant can skip questions they do not wish to answer. Answers to the questionnaire will not be connected to your name and remain confidential. The loss of confidentiality is a potential risk. Your email address will be collected only if you wish to participate in winning a \$25 gift card. You do not need to provide an email if you wish to not participate. If you enter an email, your email address will be deleted from your questionnaire when the results are analyzed. Further steps to minimize loss of confidentiality will be expanded in #6 below. In addition, there may be risks that are currently unknown or unforeseeable. Please contact me at amundsona@district279.org or 763-257-6272, or my faculty advisor Andreas Schramm, aschramm@hamline.edu to discuss this if you wish.

6. How will your privacy and the confidentiality of your data and research records be protected?

The questionnaire will be a google form and kept password protected in my google account. My laptop is also password protected. You do not have to provide an email address in the questionnaire or any personal information to be a part of the study. There will be a question that will ask you enter an email address if you want to be a part of winning a \$25 gift card. Any personal information from the study will be deleted from my computer at the end of the study. No names or personal information will be published in the study or paper.

7. How many people will most likely be participating in this study, and how long is the entire study expected to last?

I am hoping for 20+ participants. Teachers will have a few days to fill it out. The study will be done for the participant when they submit the questionnaire.

8. What are the possible benefits to you and/or to others from your participation in this research study?

Benefits to your participation in the study could include strategies of creating strong online learning environments with strong relationships and collaborative learning environments as a result of the study.

9. If you choose to participate in this study, will it cost you anything?

The study will not cost you financially. The study will cost 10 minutes of your time.

10. Will you receive any compensation for participating in this study?

There is a chance of winning a \$25 gift card.

11. What if you decide that you do not want to take part in this study? What other options are available to you if you decide not to participate or to withdraw?

Your participation in this study is entirely voluntary. You are free to refuse to participate in the study, and your refusal will not influence your current or future relationships with Hamline University or with Osseo Area Schools. In addition, if significant new findings develop during the course of the research that may affect your willingness to continue participation, we will provide that information to you.

12. How can you withdraw from this research study, and who should you contact if you have any questions or concerns?

You are free to withdraw your consent and stop participation in this research study at any time without penalty. If you wish to stop your participation in this research study for any reason, you should contact me at (amundsona@district279.org or 763-257-6272), or my faculty advisor: Andreas Schramm at aschramm@hamline.edu. You should also call or email the faculty advisor Andreas Schramm or Principal for any questions, concerns, suggestions, or complaints about the research and your experience as a participant in the study. In addition, if you have questions about your rights as a research participant, please contact the Institutional Review Board at Hamline University at IRB@hamline.edu.

13. Are there any anticipated circumstances under which your participation may be terminated by the researcher without your consent?

There are no circumstances where your participation will be terminated without your consent.

14. Will the researchers benefit from your participation in this study?

The researchers will gain no benefit from your participation in this study beyond the publication and/or presentation of the results obtained from the study, and the invaluable research experience.

15. Where will this research be made available once the study is completed?

The research is public scholarship and the abstract and final product will be cataloged in Hamline's Bush Library Digital Commons, a searchable electronic repository and that it may be published or used in other ways, such as in conference presentations or published in research journals.

16. Has this research study received approval from Osseo Area Schools where the research will be conducted?

There is consent from Osseo Area Schools.

17. Will your information be used in any other research studies or projects?

No. Your information collected as part of this research, even if identifiers are removed, will not be used in or distributed for future research studies.

* Required

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By checking yes, you are not waiving any of your legal rights. Do you wish to participate? *

I consent

I do not consent

Appendix B: Questionnaire Instrument

What is social presence theory?

Social presence theory is the degree to which someone is perceived as a real person in online communication. "Online classes depend heavily on the design of the course activities and the extent to which participants view each other as real, build trust, and share insights, experiences, values, and beliefs" (Yildez, 2004). Enhancing student's perception of social presence increases instructional effectiveness and learning in an online learning environment.

The purpose of the questionnaire is to determine teachers' perceptions of social presence in their online learning environments. We want to know what teachers think about online learning and strategies they have used to create strong relationships and collaborative learning environments.

Do you want to be a part of the drawing for a chance to win a \$25 gift card to Target? If so, please type your email address. If not, put NA *

What do you teach? *

Elementary students

Middle school students

High school students

1. Online learning is impersonal as compared to face-to-face instruction. *

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

2. Digital learning is an excellent medium for social interaction. *

Strongly agree
Agree
Neutral
Disagree
Strongly disagree

3. Students see each other and perceive everyone as real, not abstract anonymous persons. *

Strongly agree
Agree
Neutral
Disagree
Strongly disagree

4. Online learning enables students to make close and caring friendships with others *

Strongly agree
Agree
Neutral
Disagree
Strongly disagree

5. Students seemed comfortable with the online communication styles and actively interacted with other students in the class. *

Strongly agree
Agree
Neutral
Disagree
Strongly disagree

6. In online learning environments, students can convey meaning and emotion, and students are able to express themselves *

Strongly agree
Agree
Neutral
Disagree

Strongly disagree

7. While teaching virtually, students are able to often collaborate and work together on a variety of activities and projects. *

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

8. Quality of learning is excellent in online learning settings. *

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

9. Students are excelling/progressing academically in online settings similar as to in person learning. *

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

1. What was your biggest highlight in building social presence in your online classroom? *
2. What was your biggest lowlight in building social presence in your online classroom? *
3. Which digital tools or activities (for example: Jamboard, breakout rooms, group games, group projects) helped promote social presence and student's learning and why? Which ones did not? *
4. How do you build community online (facilitate cultural responsiveness)? *